

## Author index—1971

- Albert, Irwin, Checking the calculated average through subtraction, Nov., 499-500
- Ando, Masue, and Hitoshi Ikeda, Learning multiplication facts—more than a drill, Oct., 366-72
- Arnold, William R., Computation made interesting, May 347-50
- Ashlock, Robert B., Teaching the basic facts: three classes of activities, Oct., 359-65
- Barson, Alan, The mathematics laboratory for the elementary and middle schools, Dec., 565-67
- Bartel, Elaine V., Understanding through involvement, Feb., 91-93
- Becker, Stanley, Elevator numbers, Oct., 422-28
- Benner, Betsy, Remainder multiplying, Apr., 249, 267
- Beougher, Elton E., Blast-off mathematics, Apr., 215-21
- Biggs, Edith E., What's *Your* Position on the role of experience in the learning of mathematics? May, 278, 285-95
- Bohan, Harry, Paper folding and equivalent fractions—bridging a gap, Apr., 245-49
- Borgen, Jerome S., and John B. Wood, Yardstick number-line balance, Mar., 184-85
- Brong, Tedi, Fun with pegs and pegboards, Apr., 234-35
- Brousseau, André, Conceptual mathematical methodology for prospective elementary school teachers, Apr., 265-67
- Brown, Gerald W., What happened to elementary school arithmetic? Mar., 172-75
- Brumbaugh, Douglas K., Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, Jan., 49-52
- Brumfiel, Charles, A note on correctness and incorrectness, May, 320-21
- Byers, Joseph W., Lunch money—nuisance or opportunity? Jan., 57-58
- Clark, John R., Elementary school mathematics in the 1970's, Oct., 385-86
- Comber, Julia, and Geoffrey Matthews, Mathematics laboratories, Dec., 547-50
- Connelly, Ralph, and James Heddens, "Remainders" that shouldn't remain, Oct., 379-80
- Crowhurst, Norman H., Making a game of it—responsive teaching, Jan., 23-28
- Cruikshank, Douglas E., and Charles de Flandre, There always are more questions, Nov., 443-48
- de Flandre, Charles, and Douglas E. Cruikshank, There always are more questions, Nov., 443-48
- Dickoff, Steven S., Paper folding and cutting a set of tangram pieces, Apr., 250-52
- Di Spigno, Joseph, Division isn't that hard, Oct., 373-78
- Dubisch, Roy, The sieve of Eratosthenes, Apr., 236-37
- Duncan, Hilda F., Division by zero, Oct., 381-84
- Dunning, Barbara B., and Meredith D. Gall, A very legitimate pride, May, 339-45
- Einhorn, Erwin, Laboratory project—constructing a skyline, Jan., 56
- Ewbank, William A., The mathematics laboratory: what? why? when? how? Dec., 559-64
- Fernhoff, Robert, Making the most of your field trip, Mar., 186-89
- Foreman, Dale I., and William A. Mehrens, National assessment in mathematics, Mar., 137-43
- Forsythe, Allan L., and Daviette H. Stansbury, Bobby and a computer! Feb., 88-90
- Gall, Meredith D., and Barbara B.

- Dunning, A very legitimate pride, May, 339-45
- Giles, Donald, Graphing inequalities directly, Mar., 185-86
- Godsave, Bruce F., Three games, May, 327-29
- Gross, L. P., A limerick, Jan., 59
- Gross, Lawrence P., Scrambled mathematics, Feb., 70
- Grossman, Anne S., Mid-nineteenth century methods for the 1970s, Apr., 230-33
- Hamilton, E. W., Subtraction by the "dribble method," May, 346-47
- Harper, E. Harold, Letter to the editor, Feb., 114
- Hartung, Maurice L., What's *Your* Position on the role of experience in the learning of mathematics? May, 279-84
- Heddens, James, and Ralph Connelly, "Remainders" that shouldn't remain, Oct., 379-80
- Henney, Maribeth, Improving mathematics verbal problem-solving ability through reading instruction, Apr., 223-29
- Henry, Boyd, Do we need separate rules to compute in decimal notation? Jan., 40-42
- Henry, Boyd, Why can't Johnny cipher? Jan., 37-39
- Hervey, Margaret A., and Bonnie H. Litwiller, A graphical representation of multiples of the whole numbers, Jan., 47-48
- Hight, Donald W., One Teacher's Point of View, Mar., 135-36
- Hollands, Roy D., Mary and John, Mar., 176
- Ibe, Milagros D., Drawing 3-D figures from 2-D templates, Mar., 180-82
- Ibe, Milagros D., Mathematics and art from one shape, Mar., 183-84
- Ikeda, Hitoshi, and Masue Ando, Learning multiplication facts—more than a drill, Oct., 366-72
- Immerzeel, George, and Don Wiederanders, IDEAS, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16; Oct., 390-98; Nov., 480-88; Dec., 576-84
- Jacobson, Ruth S., Fun with fractions for special education, Oct., 417-21
- Jansson, Lars C., Judging mathematical statements in the classroom, Nov., 463-66
- Johnson, David R., If I could only make a decree, Mar., 147-49
- Junge, Charlotte W., editor, Things you can try, Jan., 53-59; Feb., 115-18; Mar., 180-91; Apr., 268-70; May., 346-50; Oct., 429-32; Nov., 496-500
- Kessler, Bernard M., Sue's secret mathematics: One child's view of finite differences, May, 297-300
- Kieren, Thomas E., and James H. Vance, Laboratory setting in mathematics, Dec., 585-89
- Klaver, Irene, and Terrell Trotter, Jr., Number patterns from digit sums, Feb., 100-03
- Knaupp, Jonathan E., and Kenneth J. Travers, The computer revolution needs YOU! Jan., 11-17
- Lay, L. Clark, An elementary theory of equations, Nov., 457-61
- Lazerick, Beth Ellen, The conversion game, Jan., 54-55
- Leeseberg, Norbert H., Evaluation scale for a teaching aid in modern mathematics, Dec., 592-94
- Litwiller, Bonnie H., and Margaret A. Hervey, A graphical representation of multiples of the whole numbers, Jan., 47-48
- Lopate, Clifford, Clifford's check for long division, Feb., 118
- Maertens, Norbert, and Clarence Schminke, Teaching—for what? Nov., 449-56
- Massey, Tom E., Dominoes in the mathematics classroom, Jan., 53-54
- Matthews, Geoffrey, and Julia Comber, Mathematics laboratories, Dec., 547-50
- McMahon, William E., More than just a name, Dec., 594-95
- McMillan, Polly, Nostalgia, Nov., 469
- Mehrens, William A., and Dale I. Foreman, National assessment in mathe-

- matics, Mar., 137-43  
 Milne, Esther, A number line without numerals, Mar., 189-91  
 Moser, James M., Grouping of objects as a major idea at the primary level, May, 301-05  
 Mueller, Francis J., editor, Forum on teacher preparation, Apr., 265-67; May, 399-45  
 Myers, Donald E., A geometric interpretation of certain sums, Nov., 475-79  
 Niman, John, A game introduction to the binary numeration system, Dec., 600-01  
 Norman, Laurel, Kindergarten in the ARITHMETIC TEACHER; A decade of growth, Apr., 253-56  
 O'Brien, Thomas C., and June V. Richard, Interviews to assess number knowledge, May, 322-26  
 Osborne, Alan R., editorial, Lab Oratory and the generalization gap, Dec., 545-46  
 Pagni, David L., The computer motivates improvement in computational skills, Feb., 109-12  
 Price, H. Vernon, NCTM service and the ARITHMETIC TEACHER, Jan., 5-6  
 Priellip, Robert W., Teaching one of the differences between rational numbers and whole numbers, May, 317-20  
 Reisman, Fredricka K., Children's errors in telling time and a recommended teaching sequence, Mar., 152-55  
 Reys, Robert E., Considerations for teachers using manipulative materials, Dec., 551-58  
 Richard, June V., and Thomas C. O'Brien, Interviews to assess number knowledge, May, 322-26  
 Riedesel, C. Alan, A change in "focus," Feb., 113-14  
 Riedesel, C. Alan, Research suggestions: Use of time in teaching elementary school mathematics, Mar., 177-79  
 Riedesel, C. Alan, editor, Using research in teaching, Jan., 49-52; Feb., 113-14; Mar., 177-79; May, 332-38; Nov., 513-19; Dec., 585-89  
 Rockwell, Charles H., Convention fallout, May, 306-08  
 Rode, Joann, Make a whole—a game using simple fractions, Feb., 116-18  
 Rosenberg, Howard, What's the area? Oct., 429-30  
 Rothbart, Andrea, and Esther Steinberg, Some observations of children's reactions to computer-assisted instruction, Jan., 19-21  
 Sanders, Walter J., Let's go one step farther in addition, Oct., 413-16  
 Schloff, Charles E.,  $8 = \text{turkey}$ , Apr., 268-70  
 Schminke, Clarence, and Norbert Maertens, Teaching—for what?, Nov., 449-56  
 Schwartz, Herbert, "The Experts and the Simpleton"—a fable, May, 330-31.  
 Silverman, Helene, Where are the children? Dec., 596-97  
 Silvey, Linda, Divisibility a-go-go! Jan., 46  
 Smart, James R., Mathematics education and the White House Conference on Children, Oct., 409-12  
 Smith, Frank, Divisibility rules for the first fifteen primes, Feb., 85-87  
 Smith, Lewis B., A discovery lesson in elementary mathematics, Feb., 73-76  
 Sowder, Larry, Models for fractional numbers—a quiz for teachers, Jan., 44-46  
 Sowell, David, David's Solution, Jan., 58-59  
 Stansbury, Daviette H., and Allan L. Forsythe, Bobby and a computer! Feb., 88-90  
 Steffe, Leslie P., Thinking about measurement, May, 332-38  
 Steinberg, Esther, and Andrea Rothbart, Some observations of children's reactions to computer-assisted instruction, Jan., 19-21  
 Steinberg, Zina, Will the set of children...? Feb., 105-08  
 Steinen, Ramon F., Abstract (verb) versus abstract (adjective), Apr., 257-61  
 Sullivan, John J., Confirming the Pythagorean theorem, Feb., 115-16  
 Suydam, Marilyn N., What's the answer? Nov., 439-41  
 Thompson, Mary Helen, Smile when you

- say area!, Oct., 430-32
- Travers, Kenneth J., and Jonathan E. Knaupp, The computer revolution needs YOU! Jan., 11-17
- Trotter, Terrel, Jr., and Irene Klaver, Number patterns from digit sums, Feb., 103-03
- Trueblood, Cecil R., A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, Nov., 505-12
- Tucker, Benny F., "Parallelograms": a simple answer to drill motivation and individualized instruction, Nov., 489-92
- Vance, James H., and Thomas E. Kieren, Laboratory setting in mathematics, Dec., 585-89
- Van Engen, Henry, The new formalism, Feb., 69-70
- Van Engen, Henry, The morning after, Apr., 213-14
- Vaughn, Ruth K., Investigation of line crossing in a circle, Mar., 157-60
- Walbesser, Henry H., An annotated bibliography of programmed instruction in mathematics, Dec., 568-75
- Warner, Elizabeth V., An approximation method of finding square roots, Mar., 155
- Watman, Michael X., One eagle is worth ten dollars, Mar., 145-46
- Weaver, J. Fred, Seductive shibboleths, Apr., 263-64
- Weaver, J. Fred, Some factors associated with pupils' performance levels on simple open addition and subtraction sentences, Nov., 513-19
- West, Tommie A., Diagnosing pupil errors: looking for patterns, Nov., 467-72
- Wiederanders, Don, and George Immerzeel, IDEAS, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16; Oct., 390-98; Nov., 480-88; Dec., 576-84
- Wills, Herbert, Diffy, Oct., 402-08
- Witt, Sarah M., A snip of the scissors, Nov., 496-99
- Wolfers, Edward P., The original counting systems of Papua and New Guinea, Feb., 77-83
- Wood, John B., and Jerome S. Borgen, Yardstick number-line balance, Mar., 184-85
- Wren, F. Lynwood, It's not how new you make it, but how you make it new, Jan., 7-9

## Title index-1971

- AAAS Section on Mathematics, 603-04
- Abstract (verb) versus abstract (adjective), Ramon F. Steinen, Apr., 257-61
- NCTM Affiliated Group Officers, Mar., 194-205
- An annotated bibliography of programmed instruction in mathematics, Henry H. Walbesser, Dec., 568-75
- Annual financial report, Committee on Financial Policies, Jan., 60-62
- Another milestone, Oct., 356
- Answers to "Scrambled Mathematics," Lawrence P. Gross, Feb., 87
- An approximation method of finding square roots, Elizabeth V. Warner, Mar., 155
- Blast-off mathematics, Elton E. Beougher, Apr., 215-21
- Board Action on 1970 Delegate Assembly Resolutions, Feb., 119-23
- Bobby and a computer! Allan L. Forsythe and Daviette H. Stansbury, Feb., 88-90
- Books and materials, May, 296, cover 3; Oct., 387-401; Nov., 462; Dec., 595
- Books received, Jan., 17; Feb., 83; Mar., 149, 208; Apr., 229
- A change in "focus," C. Alan Riedesel, Feb., 113-14
- Checking the calculated average through subtraction, Irwin Albert, Nov., 499-500
- Children's errors in telling time and a

- recommended teaching sequence, Fredricka K. Reisman, Mar., 152-55
- Clifford's check for long division, Clifford Lopate, Feb., 118
- Committees and Representatives, 1970/71—Supplemental List, Feb., 123
- Computation made interesting, William R. Arnold, May, 347-50
- The computer motivates improvement in computational skills, David L. Pagni, Feb., 109-12
- The computer revoution needs YOU! Kenneth J. Travers and Jonathan E. Knaupp, Jan., 11-17
- Conceptual mathematical methodology for prospective elementary school teachers, André Brousseau, Apr., 265-67
- A concern of all, Editorial Panel, Oct., 357
- Confirming the Pythagorean theorem, John J. Sullivan, Feb., 115-16
- Considerations for teachers using manipulative materials, Robert E. Reys, Dec., 551-58
- Convention fallout, Charles H. Rockwell, May, 306-08
- The conversion game, Beth Ellen Lazerick, Jan., 54-55
- David's Solution, David Sowell, Jan., 58-59
- Diagnosing pupil errors: looking for patterns, Tommie A. West, Nov., 467-72
- Diffy, Herbert Wills, Oct., 402-08
- A discovery lesson in elementary mathematics, Lewis B. Smith, Feb., 73-76
- Divisibility a-go-go! Linda Silvey, Jan., 46
- Divisibility rules for the first fifteen primes, Frank Smith, Feb., 85-87
- Division by zero, Hilda F. Duncan, Oct., 381-84
- Division isn't that hard, Joseph Di Spigno, Oct., 373-78
- Dominoes in the mathematics classroom, Tom E. Massey, Jan., 53-54
- Do we need separate rules to compute in decimal notation? Boyd Henry, Jan., 40-42
- Drawing 3-D figures from 2-D templates, Milagros D. Ibe, Mar., 180-82
- 8 = turkey, Charles E. Schloff, Apr., 268-70
- Elementary school mathematics in the 1970's, John R. Clark, Oct., 385-86
- An elementary theory of equations, L. Clark Lay, Nov., 457-61
- Elevator numbers, Stanley Becker, Oct., 422-28
- Experience and Mathematical Learning, The Editorial Panel, May, 277
- "The Experts and the Simpleton"—a fable, Herbert Schwartz, May, 330-31
- Evaluation scale for a teaching aid in modern mathematics, Norbert H. Leeseberg, Dec., 592-94
- Forum on teacher preparation, Francis J. Mueller, editor, Apr., 265-67; May, 339-45
- Fun with fractions for special education, Ruth S. Jacobson, Oct., 417-21
- Fun with pegs and pegboards, Tedi Brong, Apr., 234-35
- A game introduction to the binary numeration system, John Niman, Dec., 600-601
- A geometric interpretation of certain sums, Donald E. Myers, Nov., 475-79
- A graphical representation of multiples of the whole numbers, Margaret A. Hervey and Bonnie H. Litwiller, Jan., 47-48
- Graphing inequalities directly, Donald Giles, Mar., 185-86
- Grouping of objects as a major idea at the primary level, James M. Moser, May, 301-05
- IDEAS, George Immerzeel and Don Wiederanders, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16; Oct., 390-98; Nov., 480-88; Dec., 576-84
- If I could only make a decree, David R. Johnson, Mar., 147-49
- Improving mathematics verbal problem-solving ability through reading instruction, Maribeth Henney, Apr., 223-29
- Interviews to assess number knowledge, Thomas C. O'Brien and June V. Richard, May, 322-26



- Investigation of line crossing in a circle, Ruth K. Vaughn, Mar., 157-60
- Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, Douglas K. Brumbaugh, Jan., 49-52
- It's not how new you make it, but how you make it new, F. Lynwood Wren, Jan., 7-9
- Judging mathematical statements in the classroom, Lars C. Jansson, Nov., 463-66
- Kindergarten in the ARITHMETIC TEACHER: A decade of growth, Laurel Norman, Apr., 253-56
- Laboratory project—constructing a skyline, Erwin Einhorn, Jan., 56
- Laboratory setting in mathematics, James H. Vance and Thomas E. Kieren, Dec., 585-89
- Lab Oratory and the generalization gap, editorial by Alan R. Osborne, Dec., 545-46
- Learning multiplication facts—more than a drill, Masue Ando and Hitoshi Ikeda, Oct., 366-72
- Let's go one step farther in addition, Walter J. Sanders, Oct., 413-16
- A limerick, L. P. Gross, Jan., 59
- Looking for the research listing? Oct., 358
- Lunch money—nuisance or opportunity? Joseph W. Byers, Jan., 57-58
- Make a whole—a game using simple fractions, Joann Rode, Feb., 116-18
- Making a game of it—responsive teaching, Norman H. Crowhurst, Jan., 23-28
- Making the most of your field trip, Robert Fernhoff, Mar., 186-89
- Mary and John, Roy D. Hollands, Mar., 176
- Mathematical offprint service, Feb., 72
- Mathematics and art from one shape, Milagros D. Ibe, Mar., 183-84
- Mathematics education and the White House Conference on Children, James R. Smart, Oct., 409-12
- Mathematics laboratories, Geoffrey Matthews and Julia Comber, Dec., 547-50
- The mathematics laboratory for the elementary and middle schools, Alan Barson, Dec., 565-67
- The mathematics laboratory: what? why? when? how? William A. Ewbank, Dec., 559-64
- Memberships and Subscriptions, Dec., 602
- Mid-nineteenth century methods for the 1970s, Anne S. Grossman, Apr., 230-33
- Minutes of the Annual Business Meeting, Nov., 530-31
- A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, Cecil R. Trueblood, Nov., 505-12
- Models for fractional numbers—a quiz for teachers, Larry Sowder, Jan., 44-46
- More projects on individualizing instruction, Nov., 473-74
- More than just a name, William E. McMahon, Dec., 594-95
- The morning after, Henry Van Engen, Apr., 213-14
- National assessment in mathematics, Dale I. Foreman and William A. Mehrens, Mar., 137-43
- NCTM service and the ARITHMETIC TEACHER, H. Vernon Price, Jan., 5-6
- The new formalism, Henry Van Engen, Feb., 69-70
- 1972 Election, Feb., 124
- Nominations for the 1972 Election, Nov., 536-37
- Nostalgia, Polly McMillan, Nov., 469
- A note on correctness and incorrectness, Charles Brumfiel, May, 320-21
- A number line without numerals, Esther Milne, Mar., 189-91
- Number patterns from digit sums, Terrel Trotter, Jr. and Irene Klaver, Feb., 100-03
- Officers, Directors, Committees, Projects, and Representatives (1971-72), Nov., 531-37
- One eagle is worth ten dollars, Michael X. Watman, Mar., 145-46
- One point of view, H. Vernon Price, Jan., 5-6
- One point of view, Henry Van Engen, Feb.,

- 69-70; Apr., 213-14
- One point of view, Donald W. Hight, Mar., 135-36
- One point of view, The Editorial Panel, May, 277; Oct., 357
- One point of view, Marilyn N. Suydam, Nov., 439-41
- One point of view, Alan R. Osborn, Dec., 545-46
- One Teacher's Point of View, Donald W. Hight, Mar., 135-36
- The original counting systems of Papua and New Guinea, Edward P. Wolfers, Feb., 77-83
- Paper folding and cutting a set of tangram pieces, Steven S. Dickoff, Apr., 250-52
- Paper folding and equivalent fractions—bridging a gap, Harry Bohan, Apr., 245-49
- "Parallelograms": a simple answer to drill motivation and individualized instruction, Benny F. Tucker, Nov., 489-92
- President's Report: The State of the Council, Nov., 525-27
- Projects on individualizing instruction, Mar., 161-63
- Registrations at NCTM Conventions, Dec., 602-03
- Remainder multiplying, Betsy Benner, Apr., 249, 267
- "Remainders" that shouldn't remain, Ralph Connelly and James Heddens, Oct., 379-80
- Report of the Executive Secretary, Nov., 527-30
- Research suggestions: Use of time in teaching elementary school mathematics, C. Alan Riedesel, Mar., 177-79
- Scrambled mathematics, Lawrence P. Gross, Feb., 70
- Seductive shibboleths, J. Fred Weaver, Apr., 263-64
- The sieve of Eratosthenes, Roy Dubisch, Apr., 236-37
- Smile when you say area! Mary Helen Thompson, Oct., 430-32
- A snip of the scissors, Sarah M. Witt, Nov., 496-99
- Some factors associated with pupils' performance levels on simple open addition and subtraction sentences, J. Fred Weaver, Nov., 513-19
- Some observations of children's reactions to computer-assisted instruction, Andrea Rothbart and Esther Steinberg, Jan., 19-21
- Subtraction by the "dribble method," E. W. Hamilton, May, 346-47
- Sue's secret mathematics: One child's view of finite differences, Bernard M. Kessler, May, 297-300
- Teaching—for what? Norbert Maertens and Clarence Schminke, Nov., 449-56
- Teaching one of the differences between rational numbers and whole numbers, Robert W. Prielipp, May, 317-20
- Teaching the basic facts: three classes of activities, Robert B. Ashlock, Oct., 359-65
- Thanks from the Editorial Panel, Feb., 71-72
- There always are more questions, Douglas E. Cruikshank and Charles de Flandre, Nov., 443-48
- Things you can try, Charlotte W. Junge, editor, Jan., 53-59; Feb., 115-18; Mar., 180-91; Apr., 268-70; May, 346-50; Oct., 429-32; Nov., 496-500
- Thinking about measurement, Leslie P. Steffe, May, 332-38
- Three games, Bruce F. Godsave, May, 327-29
- Understanding through involvement, Elaine V. Bartel, Feb., 91-93
- Using research in teaching, C. Alan Riedesel, editor, Jan., 49-52; Feb., 113-14; Mar., 177-79; May, 332-38; Nov., 513-19; Dec., 585-89
- A very legitimate pride, Barbara B. Dunning and Meredith D. Gall, May, 339-45
- What happened to elementary school arithmetic? Gerald W. Brown, Mar., 172-75
- What's the answer? Marilyn N. Suydam, Nov., 439-41
- What's the area? Howard Rosenberg, Oct.,

- 429-30  
 What's *Your* Position on the role of experience in the learning of mathematics? Edith E. Biggs, May, 278, 285-95  
 What's *Your* Position on the role of experience in the learning of mathematics? Maurice L. Hartung, May, 279-84  
 Where are the children? Helene Silverman, Dec., 596-97  
 Why can't Johnny cipher? Boyd Henry, Jan., 37-39
- Will the set of children . . . ? Zina Steinberg, Feb., 105-08
- Yardstick number-line balance, Jerome S. Borgen and John B. Wood, Mar., 184-85
- Your Professional Dates, Jan., 63-64; Feb., 124-26; Mar., 206-08; Apr., 271-72; May, 352-cover 3; Oct., 433; Nov., 537-38; Dec., 604-05

## Subject index-1971

### Addition and Subtraction

- Diffy, 402-08  
 Do we need separate rules to compute in decimal notation? 40-42  
 Elevator numbers, 422-28  
 A geometric interpretation of certain sums, 475-78  
 Let's go one step farther in addition, 413-16  
 Some factors associated with pupils' performance levels on simple open addition and subtraction sentences, 513-19  
 Subtraction by the "dribble method," 346-47  
 Yardstick number-line balance, 184-85

### Affiliated Groups. See NCTM

### Aims

- Your Professional Dates, 433

### Algebra

- An elementary theory of equations, 457-62

### Area. See also Measurement

- Smile when you say area! 430-32  
 What's the area? 429-30

### Bibliography

- An annotated bibliography of programmed instruction in mathematics, 568-75

- Kindergarten in the ARITHMETIC TEACHER: A decade of growth, 253-56

### Books and Materials

- Books and materials, 387-401, 462, 595  
 Considerations for teachers using manipulative materials, 551-58  
 Evaluation scale for a teaching aid in modern mathematics, 592-94  
 More projects on individualizing instruction, 473-74  
 Projects on individualizing instruction, 161-63

### Computation

- The computer revolution needs YOU! 11-17  
 Do we need separate rules to compute in decimal notation? 40-42  
 Understanding through involvement, 91-93  
 The computer motivates improvement in computational skills, 109-12  
 An approximation method of finding square roots, 155  
 Checking the calculated average through subtraction, 499-500  
 Sue's secret mathematics: One child's view of finite differences, 297-300  
 Subtraction by the "dribble method," 346-47  
 Teaching the basic facts: three classes of activities, 359-65



Computation made interesting, 347-50

**Computer Assisted Instruction.** *See* Teaching Methods

Some observations of children's reactions to computer-assisted instruction, 19-21

**Computers**

The computer revolution needs YOU! 11-17

Bobby and a computer! 88-90

The computer motivates improvement in computational skills, 109-12

**Counting**

The original counting systems of Papua and New Guinea, 77-83

A number line without numerals, 189-91

Grouping of objects as a major idea at the primary level, 301-05

**Curriculum**

Elementary school mathematics in the 1970's, 385-86

It's not how new you make it, but how you make it new, 7-9

There always are more questions, 443-47

What happened to elementary school arithmetic? 172-75

**Decimals.** *See* Fractions

**Discovery.** *See also* Teaching Methods

Experience and Mathematical Learning, 277

Making a game of it—responsive teaching, 23-28

Investigation of line crossing in a circle, 157-60

What's *Your* Position on the role of experience in the learning of mathematics? 278-95

**Division; Divisibility**

Division by zero, 381-84

Do we need separate rules to compute in decimal notation? 40-42

David's Solution, 58-59

Divisibility rules for the first fifteen primes, 85-87

Division isn't that hard, 373-78

Clifford's check for long division, 118

Remainder multiplying, 249, 267

"Remainders" that shouldn't remain, 379-80

**Editorial Comments**

A change in "focus," 113-14

A concern of all, 357

Another milestone, 356

Experience and Mathematical Learning, 277

Lab Oratory and the generalization gap, 545-46

The morning after, 213-14

NCTM service and the ARITHMETIC TEACHER, 5-6

The new formalism, 69-70

Thanks from the Editorial Panel, 71-72

One Teacher's Point of View, 135-36

**Equations.** *See* Algebra

**Experiment.** *See* Research

**Fractions; Fractional Numbers**

David's Solution, 58-59

Dominoes in the mathematics classroom, 53-54

Do we need separate rules to compute in decimal notation? 40-42

Fun with fractions for special education, 417-21

Make a whole—a game using simple fractions, 116-18

Models for fractional numbers—a quiz for teachers, 44-46

Paper folding and equivalent fractions—bridging a gap, 245-49

Teaching one of the differences between rational numbers and whole numbers, 317-20

The conversion game, 54-55

"The Experts and the Simpleton"—a fable, 330-31

**Function.** *See* Algebra

**Games.** *See also* Recreational Mathematics

Diffy, 402-08

Dominoes in the mathematics classroom, 53-54

Elevator numbers, 422-28

A game introduction to the binary numeration system, 600–01  
 Make a whole—a game using simple fractions, 116–18  
 “Parallelograms”: a simple answer to drill motivation and individualized instruction, 489–93  
 Scrambled mathematics, 70  
 Smile when you say area! 429–32  
 The conversion game, 54–55  
 Three games, 327–29

### **Geometry**

A discovery lesson in elementary mathematics, 73–76  
 A geometric interpretation of certain sums, 475–78  
 A snip of the scissors, 496–99  
 Confirming the Pythagorean theorem, 115–16  
 Drawing 3-D figures from 2-D templates, 180–82  
 Mathematics and art from one shape, 183–84  
 Paper folding and cutting a set of tangram pieces, 250–52

### **Graphs and Graphing**

A graphical representation of multiples of the whole numbers, 47–48  
 Lunch money—nuisance or opportunity? 57–58  
 A discovery lesson in elementary mathematics, 73–76  
 Graphing inequalities directly, 185–86  
 Three games, 327–29

### **History of Mathematics and Mathematics Education**

One eagle is worth ten dollars, 145–46  
 Mid-nineteenth century methods for the 1970s, 230–33

### **Humor, Drama, Verse**

Divisibility a-go-go! 46  
 A limerick, 59  
 Nostalgia, 469

### **Individual Differences**

Mathematics education and the White House Conference on Children, 409–12

### **Individualized Instruction.** *See also* Teaching Methods

An annotated bibliography of programmed instruction in mathematics, 568–75  
 More projects on individualizing instruction, 473–74  
 Projects on individualizing instruction, 161–63

### **Laboratory Method; Laboratories**

Blast-off mathematics, 215–21  
 Considerations for teachers using manipulative materials, 551–58  
 Convention fallout, 306–08  
 Evaluation scale for a teaching aid in modern mathematics, 592–94  
 Laboratory project—constructing a skyline, 56  
 Lab Oratory and the generalization gap, 545–46  
 Laboratory settings in mathematics: what does research say to the teacher? 585–89  
 Lunch money—nuisance or opportunity? 57–58  
 Mathematics laboratories, 547–50  
 The mathematics laboratory for the elementary and middle schools, 565–67  
 The mathematics laboratory: what? why? when? how? 559–64  
 Where are the children? 596–97

### **Learning Process.** *See also* Teaching Methods

Experience and Mathematical Learning, 277  
 Interviews to assess number knowledge, 322–26  
 Teaching—for what? 449–56  
 Teaching the basic facts: three classes of activities, 359–65  
 What's *Your* Position on the role of experience in the learning of mathematics? 278–95  
 Thinking about measurement, 332–38

### **Learning Disabilities**

Why can't Johnny cipher? 37–39

### **Low Achievers.** *See* Individual Differences

## Measurement

- Laboratory project—constructing a skyline, 56
- Thinking about measurement, 332–38

## Multiplication

- Do we need separate rules to compute in decimal notation? 40–42
- 8 = turkey, 268–70
- Learning multiplication facts—more than a drill, 366–72

## NCTM

### *Committee Reports*

- Annual financial report, 60–62
- Auditor's report, 61–62
- Board Action on 1970 Delegate Assembly Resolutions, 119–23
- 1972 Election, 124
- Memberships and Subscriptions, 602
- Nominations for the 1972 Election, 536–37
- Registrations at NCTM conventions, 602–03

### *Executive Secretary's Report*

- Report of the Executive Secretary, 527–30

### *Meetings*

- Your Professional Dates, 63–64; 124–26; 206–08; 271–72; 352–Cover 3; 433; 537–38; 604–05
- AAAS Section on Mathematics, 603–04

### *Minutes*

- Minutes of the Annual Business Meeting, 530–31

### *Officers, committees, projects, and representatives*

- Officers, Directors, Committees, Projects, and Representatives (1971–72), 531–36
- Committees and Representatives, 1970/71—Supplemental List, 123
- NCTM Affiliated Group Officers, 194–205

### *President's Messages*

- President's Report: The State of the Council, 525–27
- NCTM service and the ARITHMETIC TEACHER, 5–6

## Notations and Terminology

- A game introduction to the binary numeration system, 600–01

## Numbers; Number Systems

- A graphical representation of multiples of the whole numbers, 47–48
- The sieve of Eratosthenes, 236–37
- Abstract (verb) versus abstract (adjective), 257–61
- Teaching one of the differences between rational numbers and whole numbers, 317–20

## Organizations

- Mathematical offprint service, 72
- Mathematics education and the White House Conference on Children, 409–12

## Patterns

- Number patterns from digit sums, 100–03

## Pedagogy. *See* Teaching Methods

## Psychology

- Thinking about measurement, 332–38

## Recreational Mathematics. *See also* Games

- Mathematics and art from one shape, 183–84

## Research

- Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, 49–52
- Laboratory settings in mathematics; what does research say to the teacher? 585–89
- Looking for the research listing? 358
- National assessment in mathematics, 137–43
- Paper folding and equivalent fractions—bridging a gap, 245–49
- Research suggestions: Use of time in teaching elementary school mathematics, 177–79
- Some factors associated with pupil's performance levels on simple open addition and subtraction sentences, 513–19

## Sets

- Understanding through involvement, 91–93
- Will the set of children . . . ? 105–08
- Three games, 327–29

**Subtraction.** *See* Addition and Subtraction

## Teacher Preparation

- Conceptual mathematical methodology for prospective elementary school teachers, 265–67
- A very legitimate pride, 339–45

## Teaching Methods

- Abstract (verb) versus abstract (adjective), 257–61
- Bobby and a computer! 88–90
- Children's errors in telling time and a recommended teaching sequence, 152–55
- Considerations for teachers using manipulative materials, 551–58
- Convention fallout, 306–08
- Diagnosing pupil errors: looking for patterns, 467–69
- 8 = turkey, 268–70
- Experience and Mathematical Learning, 277
- "The Experts and the Simpleton"—a fable, 330–31
- Fun with pegs and pegboards, 234–35
- Grouping of objects as a major idea at the primary level, 301–05
- If I could only make a decree, 147–49
- Improving mathematics verbal problem-solving ability through reading instruction, 223–29
- Interviews to assess number knowledge, 322–26
- Investigation of line crossing in a circle, 157–60
- It's not how new you make it, but how you make it new, 7–9
- Judging mathematical statements in the classroom, 463–66
- Laboratory settings in mathematics: what does research say to the teacher? 585–89
- Making a game of it—responsive teaching, 23–28

Making the most of your field trip, 186–89

Mary and John, 176

Mathematics laboratories, 547–50

The mathematics laboratory: what? why? when? how? 559–64

Mid-nineteenth century methods for the 1970's, 230–33

A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, 505–11

Models for fractional numbers—a quiz for teachers, 44–46

More than just a name, 594–95

The new formalism, 69–70

A note on correctness and incorrectness, 320–21

A number line without numerals, 189–91

Paper folding and equivalent fractions—bridging a gap, 245–49

Projects on individualizing instruction, 161–63

Research suggestions: Use of time in teaching elementary school mathematics, 177–79

What's *Your* Position on the role of experience in the learning of mathematics? 278–95

Seductive shibboleths, 263–64

The sieve of Erathosthenes, 236–37

Some observations of children's reactions to computer-assisted instruction, 19–21

Teaching—for what? 449–56

Teaching the basic facts: three classes of activities, 359–65

Thinking about measurement, 332–38

Understanding through involvement, 91–93

A very legitimate pride, 339–45

What happened to elementary school arithmetic? 172–75

What's the answer? 439–42

Where are the children? 596–97

Why can't Johnny cipher? 37–39

**Textbooks.** *See* Books and Materials

**Volume.** *See* Measurement

